

DOCUMENT RESUME

ED 191 537

JC 800 509

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TITLE A Study of Student Attrition and Retention in Postsecondary Occupational Education Programs at Two-Year Public and Independent Degree-Granting Institutions in New York State.
INSTITUTION New York State Education Dept., Albany. Bureau of Occupational Education Research.
PUB DATE Apr 80
NOTE 36p.
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Persistence; Agricultural Colleges; Community Colleges; Data Collection; Educational Attainment; Literature Reviews; *School Holding Power; State Colleges; State Departments of Education; *Student Attrition; Student Characteristics; Tables (Data); Technical Institutes; *Two Year Colleges; Two Year College Students; Withdrawal (Education)
IDENTIFIERS *New York

ABSTRACT

Progress to date is summarized for a four-phase research project conducted by the New York State Education Department to identify the factors which affect a student's decisions to complete, postpone, or discontinue his/her occupational education at a two-year, postsecondary institution. After introductory material which examines the need for attrition research and then reviews the literature concerning attrition at two-year institutions, the report discusses the outcomes of Phase I of the project, which consisted of an analysis of attrition and retention data currently available at the New York Education Department. Included in this section is a comparison of the total number of completers and leavers by occupational program area among students at various state two-year institutions during 1978-79, as well as a summary of the major reasons students reported for dropping out. Next, the report analyzes findings for Phase II, during which data were collected from the State University of New York, the City University of New York, and the Commission on Independent Colleges and Universities. Areas of investigation included causes of attrition, the use of exit interviews, and retention methods and their success. Finally, the report examines methodology to be used during Phases III and IV in collecting relevant data directly from the two-year colleges and in surveying the students. Data tables and a bibliography are included. (JF)

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ED191537

A STUDY OF STUDENT ATTRITION AND RETENTION IN POSTSECONDARY OCCUPATIONAL
EDUCATION PROGRAMS AT TWO-YEAR PUBLIC AND INDEPENDENT
DEGREE-GRANTING INSTITUTIONS IN NEW YORK STATE

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Bureau of Occupational Education Research
The University of the State of New York
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April 1980

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FOREWORD

The motive for this study was the recognition of a need for in-depth research on attrition, retention, and completion of occupational education programs undertaken by postsecondary students at two-year colleges in New York State. The following is an interim report summarizing the data available from various sources: The State Education Department, the Central Administration System of State University of New York and of The City University of New York, and the Commission on Independent Colleges and Universities. This report includes statewide institutional data and, to a limited degree, individual data.

The staffs of the Bureau of Occupational Education Research and the Bureau of Grants Administration defined the goals and formulated procedures for the study. They were then approved by the Research Advisory Committee for Occupational Education. The study was conducted by Marie Whalen Welch, a Research Assistant in the Bureau of Occupational Education Research. The findings should be of use to educators who plan and allocate resources for occupational education programs and to those who counsel and register students.

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A STUDY OF STUDENT ATTRITION AND RETENTION IN POSTSECONDARY OCCUPATIONAL
EDUCATION PROGRAMS AT TWO-YEAR PUBLIC AND INDEPENDENT
DEGREE-GRANTING INSTITUTIONS IN NEW YORK STATE

CHAPTER ONE
INTRODUCTION

Research on college dropouts was identified as a priority by Gerald Freeborne, Assistant Commissioner for Occupational and Continuing Education, on the recommendation of the Evaluation Committee of the New York State Advisory Council on Vocational Education.

The Fall 1978 Postsecondary Education in New York State featured an article by Donald Y. Nutter of the New York State Education Department, Office of Postsecondary Research, that provided a summary of the data collected by the Higher Education Data System (HEDS) on the subject of student retention. The author used tables to show reported statistics of the cohort survival data for first-time, full-time students in a four-year institution in New York State. Mr. Nutter observed, in the article, that there are numerous determinants which affect attrition and retention and advised, therefore, that the subject needs more research before conclusions can be drawn from the statistics now available. A similar suggestion had been made by Dorothy Knoell (Pervin and others, 1966, p. 69, 79), a specialist in community college education.

"A new many-pronged attack on attrition research is needed. One of the most serious gaps in our knowledge of dropouts as a potential loss of talent is in the area of the junior college. It is fairly well established that a large percentage of high school graduates who enter two-year colleges fail to complete certificate or associate degree programs."

Motivated by Mr. Freeborne's recommendation and the opinions of specialists in the field of postsecondary education, the Research Advisory Committee on Occupational Education recommended that the Bureau of Occupational Education Research conduct a study on attrition and retention for the purpose of:

- 1) Identifying the factors which affect a student's decision to complete, postpone, transfer, or discontinue his/her occupational education at a two-year, postsecondary institution.
- 2) Providing a relevant information base on attrition and retention for program planning and allocation of resources on the state and local levels.

The study was designed in four tiers:

- 1) Tier One consisting of a compilation and analysis of data collected statewide and already available in the Department.
- 2) Tier Two consisting of a collection and analysis of data available from the central offices of SUNY, CUNY, the Commission on Independent Colleges and Universities, and the Association of Private Degree-Granting Institutions.
- 3) Tier Three presenting an analysis of data collected directly from two-year postsecondary institutions.
- 4) Tier Four presenting an analysis of data made available on individual student groups through the Occupational Education Data Systems (OEDS) and directly from former students.

This report deals with Tiers One and Two and will provide the foundation for the full study.

The Cohort Survival Report from the Higher Education Data System (HEDS), Fall 1978, uses the following definitions:

- 1) Associate Degree Program Students: Those in full-time, degree-credit study leading to an associate degree (A.A., A.S., A.O.S., or A.A.S.).
- 2) First-time Freshmen include the following:
entering freshmen who had not previously attended ANY college;
students enrolled in the Fall term who attended college for the first time during the previous summer; students who entered with advanced standing (college credit earned before graduation from h.s.) including those with sophomore standing First-time unclassified students were not included.
- 3) Full-time: those whose academic load-course work or other required activity is at least 75% of the normal full-time load. Undergraduate students must carry at least 12 credit hours to be considered full-time.

The Follow-up of Students Completing or Leaving Postsecondary Occupational Education Programs from the Occupational Education Data Systems (OEDS) uses the following definitions:

- 1) A program completer is defined as a person who has enrolled in and has successfully met all of the requirements of an occupational program.
- 2) A program leaver is defined as a person who has left a program in which he/she had been enrolled without successfully completing or meeting all program requirements.

CHAPTER TWO REVIEW OF LITERATURE

There is an abundance of material available on the general subjects of attrition and retention of college students, but little of it relates specifically to two-year institutions or occupational education. Two national studies, however, entitled College Dropouts: A National Profile (Astin, 1972) and Withdrawal from Institutions of Higher Education (Fetters, 1977) included two-year institutions in their population.

The national population for Astin's study completed in 1972 consisted of students in 217 typical two-year institutions not identified by state. Of this population, one-third of all the first year students did not return for a second year of study. Of the two-thirds who did return, less than two-thirds completed the requirements for an associate degree. The resulting retention rate was less than 44% for the two-year colleges in the study. Students still enrolled after completion of the second year were not classified as dropouts, nor were those who had requested transfers to other institutions. One interesting finding from the study was the importance of the high school average in predicting the probability of a student's completing a postsecondary program.

Fetters (1977) identified those students who entered college in October 1972 and 1973, but had not received a degree or were not enrolled in any postsecondary occupational education program by October 1974. From this collection of data, William Fetters drew the following conclusions:

- 1) Two-year institutions experienced a withdrawal rate of 39% as compared with 24% at four-year institutions.
- 2) Predominant reasons for withdrawal were nonacademic to a greater degree in two-year than in four-year institutions.
- 3) The overall withdrawal rate in the first year exceeded that in the second year.
- 4) The academically related withdrawal rate was higher for the first than the second year.
- 5) The withdrawal rate was higher at four-year public institutions than at four-year private institutions.
- 6) The withdrawal rates were not significantly different on the basis of sex.
- 7) The withdrawal rates appeared not to be affected by the size of the institutions.
- 8) Students of higher socioeconomic status at two-year institutions had the lowest withdrawal rates.

9) Lower withdrawal rates were common to the following groups of students:

- a. those whose fathers had graduate degrees
- b. those who were of the Jewish religion
- c. those who worked only part-time or not at all
- d. those who were taking academic rather than occupational programs
- e. those who were full-time students
- f. those who had higher academic standing

Both of the foregoing studies were made from data obtained nationwide. The State University of New York, however, had compiled some statistics relative only to its own members for the classes of 1973, 1974, 1975, and 1976. For example, referring to students who received two-year degrees from the agricultural and technical colleges (not including Alfred and Morrisville) for those years respectively, retention rates were 52.3%, 54.1%, 52%, and 58.5%. At the community colleges (excluding Westchester) for the same years, retention rates for students receiving two-year degrees were 42.3%, 40.1%, 37.9% and 39.2%. The range of retention rates at these colleges extended from 70.3% to 16.8%.

At Alfred Agricultural and Technical College, 62.1% of the students of the 1976 class received degrees. This was the highest retention rate for an individual two-year State University of New York institution. The lowest retention rate at a New York State agricultural and technical college was 51.2%.

At the City University of New York, a study devoted attention to first-year freshmen entering in September 1970. By the end of eight semesters, 23.1% had received associate degrees; 2.8% earned bachelor degrees; and 7.7% were still enrolled at a community college (Kaufman, 1975.) Kaufman noted that:

- 1) Women students experienced a higher retention rate than men
- 2) Whites experienced a higher retention rate than blacks
- 3) Families having higher incomes experienced a higher retention rate than those in lower income brackets
- 4) High school averages were a factor in retention: the retention rate for those who had a high school average of 80 or above was 38.7%; for those who had a high school average of 70 or lower, the retention rate was 15.4%.

The Commission on Independent Colleges and Universities reported cohort survival data for New York State. At the associate level, 54.2%

of the initial group from the Fall Class of 1972 had received a degree by the Fall of 1974. By the Fall of 1975, the figure was 59.1% and by June 1976, 59.3%. These percentages are comparable to the statistics obtained for baccalaureate degrees awarded to the group entering in 1970. In 1974, 56.6% received a bachelor's degree; in 1975, the percentage was 63.5%; by 1976, 64.4% had received the degree.

CHAPTER THREE TIER ONE

The part of the study plan designated as Tier One was intended to acquire and analyze data on the subject of attrition and retention already available at the State Education Department.

Postsecondary institutions had been requested to provide the Occupational Education Data System of the State Education Department with the following information for the 1978-79 school year:

- 1) The number of students enrolled in occupational education programs
- 2) The number of students completing occupational education programs
- 3) The number of students leaving occupational education programs
- 4) The number of occupational education teachers and para-professional staff assigned to occupational education programs

The postsecondary institutions were then approached for the first time in 1978-79 to poll former students who had completed or left without completing an occupational education course. The poll would determine former students' employment status and, where relevant, their reasons for leaving.

From the response, causes for leaving were classified as follows:

- 1) Obtaining employment
- 2) Entering military service
- 3) Permanently dropping out of school
 - a. Financial reasons
 - b. Other reasons
- 4) Temporary academic curtailment
- 5) Failure to meet program standards
- 6) Failure of program to fulfill student needs or expectations
- 7) Institutional transfers

From the information obtained as a result of these efforts, the attrition and retention data were tabulated. Table I compares number of completers with leavers by sector/institution type for each occupational education program. Table II makes similar comparisons using percentages. Tables III to X make a percentage comparison of the significance of the eight classes of reasons for attrition.

The following tables show the numbers of completers and leavers and the percentage of completers as compared to the leavers. The enrollment figures are not the sum of the completers and leavers, because the percentages for completers and leavers do not give attrition, retention, or completion rates, but only compare completers and leavers. The percents for each program are rounded off to the nearest percent so the total may be 100 plus or minus one.

Analysis of the data included in Tier One follows.

TABLE I
Comparison of Total Number of Completers and Leavers
by Occupational Education Program and Sector/Institution Type

Educational Program	SUNY Ag. & Tech.		SUNY Community		CUNY Community		Independent		Proprietary		All Agencies	
	CMPLTS	LVRS	CMPLTS	LVRS	CMPLTS	LVRS	CMPLTS	LVRS	CMPLTS	LVRS	CMPLTS	LVRS
Agriculture	1213	364	80	34	NA	NA	311	150	-	-	1604	568
Distributive	673	257	2133	971	1101	NA	215	87	355	232	4477	1647
Health Occupations	810	105	2732	754	1680	NA	549	142	20	4	5791	1005
Home Economics	288	74	399	133	222	NA	1005	188	-	-	1914	395
Business and Office	985	409	3141	1630	1782	NA	232	85	2108	1656	8248	3780
Technical	1163	371	1650	863	618	NA	270*	759*	64	17	3765	2010
Trade, Industrial Service	1159	254	2919	1037	258	NA	167**	394**	42	39	4545	1724
TOTAL	6291	1934	13054	5442	5661	NA	2749	1805	2589	1948	30344	11129

NA Not Available

* The high ratio of leavers to completers is affected by the aeronautical technology program. If computed the retention rate would be higher taking increasing reentry rates into consideration.

** The high ratio of leavers to completers is affected by attrition in commercial arts program.

CMPLTS signifies completers
LVRS signifies leavers

TABLE II
Comparison of Percentages of Completers and Leavers
by Occupational Education Program and by Sector/Institution Type

Educational Program	SUNY Ag. & Tech.		SUNY Community		CUNY Community		Independent		Proprietary		Agencies***	
	CMPLTS %	LVRS %	CMPLTS %	LVRS %	CMPLTS %	LVRS %	CMPLTS %	LVRS %	CMPLTS %	LVRS %	CMPLTS %	LVRS %
Agriculture	77	23	60	40	NA	NA	67	33	-	-	74	26
Distributive	65	35	69	31	NA	NA	71	29	60	40	67	33
Health Occupations	89	11	78	22	NA	NA	79	21	83	17	80	20
Home Economics	80	20	75	25	NA	NA	84	16	-	-	81	19
Business and Office	71	29	66	34	NA	NA	73	27	56	44	63	37
Technical	76	24	66	34	NA	NA	26*	74*	79	21	61	39
Trade, Industrial Service	82	18	74	26	NA	NA	30*	70*	52	48	71	29
TOTAL PROGRAMS	76	24	71	29	NA	NA	60	40	57	43	69	31

NA means not available

* The high ratio of leavers to completers is affected by the aeronautical technology program. If computed the retention rate would be higher taking increasing reentry rates into consideration.

** The high ratio of leavers to completers is affected by attrition in commercial arts program.

*** The percentages of total completers for all agencies (sectors) by program computed without CUNY community college completers.

CMPLTS signifies completers
LVRS signifies leavers

TABLE III
Reported Reasons for Students Leaving Postsecondary
Agricultural Education Program by Percents 1978-79

REASONS FOR LEAVING									
SECTOR	Total Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	364	6	0	6	68	3	8	5	5
SUNY Community	54	11	0	8	69	0	17	0	0
Independent	150	1	0	3	47	8	40	1	1
All Agencies	568	5	0	5	62	4	17	3	3

TABLE IV
Reported Reasons for Students Leaving Postsecondary
Distributive Education Programs by Percents 1978-79

REASONS FOR LEAVING									
SECTOR	Total Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	357	9	0	6	58	5	9	6	7
SUNY Community	971	11	1	5	48	4	21	1	9
Independent	87	8	0	6	43	14	20	6	5
Proprietary	232	10	<1	8	33	3	27	9	10
All Agencies	1647	10	1	6	48	4	19	3	9

TABLE V
Reported Reasons for Students Leaving Postsecondary
Health Occupation Education Programs by Percents 1978-79

SECTOR	Total Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	105	2	0	3	89	0	1	4	2
SUNY Community	754	6	<1	6	58	13	12	1	4
Independent	142	5	0	5	23	11	45	8	4
Proprietary	4	25	0	0	50	0	25	0	0
All Agencies	1005	5	<1	5	56	12	16	3	3

TABLE VI
Reported Reasons for Students Leaving Postsecondary
Home Economics Education Programs by Percents 1978-79

SECTOR	Total Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	74	1	0	3	77	3	1	0	15
SUNY Community	133	6	<1	7	50	2	25	5	5
Independent	188	4	0	14	28	8	36	8	2
All Agencies	395	4	<1	10	44	4	16	3	1

TABLE VII
Reported Reasons for Students Leaving Postsecondary
Business and Office Education Programs by Percents 1978-79

SECTOR	Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	409	5	0	3	75	4	6	3	5
SUNY Community	1630	16	<1	2	35	5	16	4	22
Independent	85	12	2	5	16	16	26	2	20
Proprietary	1656	11	<1	15	37	10	16	6	4
All Agencies	3780	12	<1	8	40	7	15	5	12

TABLE VIII
Reported Reasons for Students Leaving Postsecondary
Technical Education Programs by Percents 1978-79

SECTOR	Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	371	2	0	2	86	1	4	2	3
Community	863	18	<1	6	38	5	26	2	4
Independent	759	8	1	3	36	1	47	1	2
Proprietary	17	23	0	23	23	0	18	0	12
All Agencies	2010	11	1	4	46	3	30	1	3

TABLE IX
Reported Reasons for Students Leaving Postsecondary
Trade, Industrial and Service Education Programs by Percents 1978-79

SECTOR	Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	254	7	1	4	40	6	33	4	5
SUNY Community	1037	10	1	4	43	10	23	4	6
Independent	394	3	0	3	7	1	81	3	2
Proprietary	39	8	0	10	36	15	8	5	18
All Agencies	1724	7	1	4	40	6	33	4	5

TABLE X
Summary Totals by Sector of Students Leaving
New York State Postsecondary Occupational Education Programs 1978-79

SECTOR	Leavers	% Employment	% Military	% Financial	% Other Than Financial	% Temporary Curtailment	% Dismissed	% Inadequate Program	% Transferred
SUNY Ag & Tech	1934	5	0	4	74	3	6	4	5
SUNY Community	5442	13	1	4	43	7	20	3	11
Independent	1805	6	<1	5	28	5	50	3	3
Proprietary	1948	11	1	14	36	9	17	6	5
All Agencies	11129	10	<1	6	45	6	22	4	8

From the figures shown in Tables I and II, of the total number of completers and leavers reported from all postsecondary institutions that give associate degrees in occupational education in New York State, 69% were completers in the 1978-79 school year. Of these, health occupations and home economics programs (in that order) maintained the highest student completion rates. This ratio for these two programs was common to all sectors with the exception of the independent colleges where the order was reversed. The lowest percentages for completers, as shown in Table II, appear in the technical education, business and office education, and distributive education programs. If a breakout of the courses included in technical education were available, aeronautical technology, electronic technology, and other engineering technology courses would show to what extent the engineering courses affect the overall completion rate for the technical education program. Similarly, the low completion rate for trade, industry and service education reflects high attrition in the commercial arts course which is a part of that program area.

Of the eight categories of reasons offered by students for leaving occupational education courses at postsecondary two-year institutions, three categories showed the highest frequencies. They were listed, as follows, in rank order.

- 1) Dropping out for other than financial reasons
- 2) Academic dismissal
- 3) Choosing to accept employment

Summary

The purpose of Tier One was to identify what data were available in the New York State Education Department.

- 1) SUNY agricultural and technical colleges provided information regarding the seven occupational education programs. Seventy-six percent (76%) of the total number of students enrolled in the various occupational education programs completed their postsecondary education, while 24% did not.
- 2) SUNY community colleges provided information regarding the seven occupational education programs. Seventy-one percent (71%) of the total number of students completed their postsecondary occupational education program, while 29% did not.
- 3) At the time of the study, CUNY community colleges did not have any information available about students who had left the six occupational education programs.
- 4) Independent colleges provided information regarding the seven occupational education programs. Sixty percent (60%) of the total number of students completed their postsecondary

occupational education while 40% did not continue the program.

- 5) Of the total number of sector/institution types reporting, 69% of the students who began college in the Fall of 1977 completed their postsecondary occupational education. Thirty-one percent (31%) of the total number did not continue their education to completion.
- 6) Health occupation education programs had the highest rate of completers at the three sectors of SUNY agricultural and technical colleges, SUNY community colleges, and proprietary schools.
- 7) At the two-year independent colleges, occupational home economics education had the highest rate of completion with health occupations rating in second place.*
- 8) At the two-year independent postsecondary schools, the completion rate for the technical occupational education program showed a small percentage of completers as compared to leavers. The aeronautical technology program and other engineering technology courses contributed to this ratio.
- 9) Also at the two-year independent postsecondary schools, leavers far outnumbered completers in trade, industry and service education. Leavers in commercial arts programs largely contributed to this ratio.

*Occupational Education Data System (OEDS) includes occupational home economics as a program area. Postsecondary education does not consider this an appropriate category. Home economics related courses have titles such as care and guidance of children, food services, clothing and textiles, and home furnishing.

CHAPTER FOUR
TIER TWO

As projected in the "Introduction" to this report on student attrition and retention, Tier Two was to be an analysis of the data available from the central offices of the State University of New York and The City University of New York, and from the Commission on Independent Colleges and Universities, and the Association of Private Degree Granting Institutions.

Vice Chancellor James S. Smolt of SUNY, in December 1977, appointed the Retention Improvement Program (RIP) Task Force to identify causes of student attrition

"and serve as a catalyst to State University campuses in their continuing efforts to increase retention of students" (Bader, 1978, p. 1).

Its report was submitted to the Vice Chancellor June 15, 1978. The RIP Task Force also prepared a resource manual and recommended the appointment of a SUNY Retention Information and Resource Coordinator to provide a continuing source of information and referral for campuses (Bader, 1978, p. 5).

A summary of the implications of these reports follows. Comparing first-time, full-time students who entered postsecondary education in the Fall of 1977 with those who started in 1972, at the agricultural and technical colleges:

- 1) Academically, the 1977 class was equal to or better than the class of 1972
- 2) The 1977 class experienced greater financial need
- 3) The 1977 class represented as much (or more) ethnic diversity
- 4) Little difference in the tendency toward vocational/professional goals was apparent between the class of 1977 and that of 1972.

At the community colleges:

- 1) Academically, 50% of the 1977 entrants compared favorably with those of 1972; 50% had a lower academic average
- 2) The financial need was equal or greater for 1977 students than for those in the 1972 class
- 3) There was as much, or more, ethnic diversity in the 1977 class
- 4) The tendency toward vocational/professional goals was much higher for the 1977 class

Comparing the availability of student services to the class of 1977 with similar services provided to students in the 1972 group at the agricultural and technical colleges:

- 1) There was improved financial aid advisement at 88% of these colleges
- 2) There was greater commitment of resources to campus security at 83% of these colleges
- 3) Greater resources were committed, or new policies developed, for academic/personal advisement at 76% of the colleges
- 4) New policies were developed for an academic warning system at 50% of these institutions; (70% notify students who have academic difficulties at midterm or final grade report)
- 5) Fifty percent developed new housing policies
- 6) There has been increased commitment of resources to remedial instruction

At the community colleges, the comparisons were made between those students in the 1975 class and those who entered in the 1972 class. For the 1975 class, there were an increased commitment to academic personal advisement, financial aid advisement, and remedial instruction. There was improvement in the academic warning system. Students who had academic difficulties in the 1975 class were notified at midterm or final grade report in 71% of the community colleges (Annas, 1978, p. 132-143).

Factors affecting student attrition were ranked in order of importance. At agricultural and technical colleges, the three highest ranking causes of attrition were:

- 1) Personal reasons
- 2) Academic dismissal
- 3) Requiring an academic program not offered by the college

All agricultural and technical colleges and 93% of the community colleges required an exit interview with students. If a student should leave without complying in this regard, a follow-up attempt was made by phone or personal letter.

All agricultural and technical colleges provided some alternative suggestions to students who were voluntarily or involuntarily withdrawing. Such suggestions included:

- 1) Counseling
- 2) Courses in "continuing education"
- 3) Change of program
- 4) Leave of absence
- 5) Academic survival workshops

- 6) Part-time study
- 7) A certificate program offering developmental studies tutoring
- 8) Non-matriculated status

Half of the colleges reported success in most cases when one of these choices was tried. Of the other 50%, the effect was negative in the majority of instances in which alternatives were attempted.

At 96% of the community colleges where similar services were offered, the estimated effectiveness was from 22% to 37%.

In the Resource Manual prepared by the RIP Task Force (Bader, 1978), it was reported that student retention had improved in the last thirteen years by six to seven percent. The Manual included the retention programs of six agricultural and technical colleges and eleven community colleges. Attrition studies of three of the agricultural and technical colleges were described and the following reasons for attrition identified:

- 1) One of these colleges rated students' personal problems the primary reason for withdrawal; one rated fear of failure as the primary reason. One of these noted financial problems as the second most important cause.
- 2) The third of these colleges indicated students' disenchantment with instructional programs, or students' adoption of new goals as causes of attrition.

The retention programs of the six agricultural and technical colleges include the following methods considered by them the most successful:

- 1) Offering a variety of living styles
- 2) Providing an effective program of vocational and occupational counseling for prospective students to include follow-up counseling
- 3) Having available a high intensity advisement program for incoming freshmen who indicated low probability of success
- 4) Trying to find part-time work for students having financial difficulties
- 5) Arranging individual study programs to include reduced course load for students having academic problems
- 6) Counseling by adult professionals and resident hall directors for freshmen
- 7) Participating with BOCES and high schools in providing secondary students with information to help them make a realistic choice of college and career
- 8) Instituting a "stop-out" program that permits students to have a leave of absence with an agreement for readmission
- 9) Training program for residence hall directors
- 10) Effective warning system for potential dropouts
- 11) Encouragement to students on probation
- 12) Cooperation of the Economic Opportunity Program staff
- 13) Orientation of freshmen and their parents during the summer preceding the start of college

- 14) Peer tutoring
- 15) Cooperation of Placement and Career Development Office

In reviewing goals of students entering two-year colleges, it appeared that many never intended completing the program at the college where they enrolled. This conclusion was supported by various facts that help explain why the attrition rate of two-year colleges is higher than that of four-year colleges. The following reasons for a student not completing the required work showed that the college fulfilled a service to the student that did not include awarding a degree:

- 1) Transferring to another college although the student's grades had improved
- 2) 1 + 1 agreements: student many spend one year at one college and the second year at another college
- 3) College attendance for acquisition of job skills
- 4) Effect of the open admissions policy
- 5) College attendance as an exploration process

The methods found most successful in retaining potential dropouts at agricultural and technical colleges and community colleges were:

- 1) Counseling: personal, academic, and career
- 2) Encouraging greater involvement with the campus community
- 3) Peer tutoring
- 4) Early identification system
- 5) Exit interview
- 6) Financial aid advisement

Campus activities that encouraged completers were:

- 1) Articulation practices and projects
- 2) Program of student extracurricular activities
- 3) Athletically oriented campus activities
- 4) Counseling services
- 5) Developmental centers

Aspects of the campus that influenced students to complete post-secondary programs were:

- 1) Quality of programs and instruction
- 2) Range of course offerings
- 3) Size of classes
- 4) Annual cost of attendance
- 5) Location of campus
- 6) Familiarity with campus before admission
- 7) Familiarity with social environment
- 8) Size of student body
- 9) Excellence of placement assistance and records transfer

The Bulletin of the Regents 1976 Statewide Plan for the Development of Postsecondary Education required the Commission on Independent Colleges and Universities to submit recommendations to the Regents, as well

as summaries of the member institutions' master plans, to serve as guidelines for policy development and future legislative programs. An analysis of the resulting master plan was presented in a publication (Gardner, 1976).

The Commission's overriding recommendation related to various elements of the financial problems threatening education in New York State. Associated with the critical state of institutional support, the report indicated, was the prediction of declining enrollments. Consequently, the Commission's master plan comprised a number of proposals to alleviate that situation. It also indicated the importance of the Regents developing a philosophy "in regard to continuing education that would provide guidelines to all institutions at the postsecondary level."

It was evident from the Commission's report that the majority of the independent institutions endorsed the concept of a liberal arts education. The summaries revealed, however, that more and more colleges are recognizing student demands for career preparation.

Also emphasized in the individual summaries were plans to counteract the effects of the expected decline in enrollment (Gardner, June 1976, p. 33).

"Probably the most pervasive methods of accomplishing the objectives are to intensify student recruiting efforts and to improve the retention rates of undergraduates."

Acknowledging that the attrition rate among lower classmen had been a concern, the report pointed out that student services were receiving increased funding from some colleges and in those instances increased retention rate had resulted.

Summary

Tier Two was designed to gather information already available from the Central Administrations of SUNY and CUNY and the Commission on Independent Colleges and Universities on the rates and reasons for attrition and retention in the seven program areas of Occupational Education.

Three major sources provided the basis for the data used in Tier Two. They were:

- 1) SUNY sector (SUNY agricultural and technical institutions and SUNY community colleges) - Retention of Students - A RESOURCE Manual compiled by the State of New York Retention Improvement Programs Task Force.
- 2) Independent sector - Individual letters requesting studies already completed by the independent colleges and universities and a publication titled A Capacity for Innovation: 1976

Master Plan of the Commission on Independent Colleges and Universities.

- 3) CUNY sector - Student Retention and Graduation at The City University of New York: Fall 1970 to Spring 1974.

The following represents a synopsis of the data identified in Tier Two.

- 1) The three most frequent causes of attrition at the agricultural and technical colleges were: a) student had personal reasons, b) academic dismissal, and c) student desired an academic program not offered by the colleges.
- 2) An exit interview was required by all of the agricultural and technical colleges.
- 3) Ninety-three percent of the community colleges required an exit interview.
- 4) Alternatives were provided to those students who are voluntary or involuntary withdrawals at the agricultural and technical and community colleges.
- 5) Many students who enter two year colleges never intend to complete the programs. The students' goals have been fulfilled during their stay at the college.
- 6) A variety of methods have been employed at the agricultural and technical colleges for retaining potential dropouts.
- 7) A wide range of campus activities helped to encourage student persistence at the various agricultural and technical colleges reporting.
- 8) Retention rates have increased six to seven percent in the last 13 years.
- 9) Of the six community colleges reporting, many reasons for attrition were cited. Among the reasons were personal problems, lack of interest, academic problems, change of academic status, health, family problems, financial problems, and indefinite goals.
- 10) The program developed by the institutions to increase retention resulted from needs identified by the individual institutions.

The studies supplied by SUNY Central, the Commission on Independent Colleges and Universities and the individual institutions provided interpretation of some of the data already on file at the State Education Department (SED). SED included all noncompleters in their statistics on attrition. The following information should explain, in part, why the attrition rates might not provide a complete and/or total representation of the problem.

- 1) Some students, who did not successfully obtain a degree, continued in the program to complete it and some who dropped out reentered.
- 2) The overall retention rate is greater than completion rate.
- 3) It has been found that 44% of the returnees graduate and that the reentry rate is growing.
- 4) Some students, at the time of entry, did not intend to complete the program, but were using it as a stepping-stone to another program or institution.

CHAPTER FIVE RECOMMENDATIONS FOR CONTINUATION

As stated in the introduction, the long-range goals of this study on attrition and retention in postsecondary occupational education programs for Tiers One through Four were:

- 1) To identify those factors which affect a student's decision to complete, postpone, transfer, or discontinue his/her occupational education at a two-year postsecondary institution.
- 2) To provide an information base on attrition and retention for the purposes of program planning and allocation of resources at the state and local levels.

The first two tiers were designed to summarize the factors which affect a student's completion and/or discontinuation of his/her postsecondary occupational education. The data compiled in Tiers One and Two will be used as a foundation for a subsequent, more complete, review of the subject in Tiers Three and Four.

Tiers One and Two helped to establish some of the elements that may have an effect on a student's decision to complete or leave a program of study. Further research is needed before recommendations can be made. In addition, there is a need to investigate further those factors that influence attrition and retention in occupational education programs.

The inconsistency of data that were collected suggests that attrition and retention are complex problems which cannot easily be solved. The purpose of Tiers Three and Four will be to substantiate the results of Tiers One and Two. This investigation will involve surveying the institutions and former students who were enrolled as first-time, full-time occupational education students in September 1978. An attempt will be made to answer the following questions:

- 1) What are the factors that influence student attrition and retention?
- 2) Does the college completer differ from the leaver in terms of personality, interest, aptitude, and attitude?

Additional research questions will center around the program leaver. An attempt will be made to identify what happens to program leavers and answer the following questions.

- 1) Do a significant number of program leavers remain in occupational education, but transfer to a different program in the same institution?
- 2) Do a significant number of program leavers remain in occupational education, but transfer to the same or a

different program in a different program in a different institution?

- 3) Do a significant number of program leavers change from a full-time status to part-time or change from day to evening programs?
- 4) Do a significant number of program leavers postpone education due to a variety of reasons, but have the intention to return and complete the program?
- 5) Do a significant number of program leavers withdraw after receiving sufficient occupational education employment skills to obtain an entry-level job?

Tier Three Methodology

The population for Tier Three will consist of the two-year, degree-granting (community, agricultural and technical, independent) institutions in New York State which offer postsecondary occupational education programs.

The sampling strategy will be to select a stratified random sample from the population. The stratification factors will be: 1) major subject area, (e.g., business and commerce technologies); 2) sector/institution type, (e.g., independent); and 3) occupational education planning regions (13). The sample will be of sufficient size to ensure the statistical validity of the results without creating an excessive burden for onsite data collection. Data will be collected from the selected schools through the use of a questionnaire given to key administrators.

Prior to developing an instrument, a small sample of key administrators will be consulted for the following information:

- Perceptions about some students decisions to remain in or leave the occupational education program.
- Data elements which they feel should be examined in the study
- The names and addresses of students who were enrolled in the occupational education programs for the class of 1978-80.

The primary analysis of the data will be by frequency distributions, percentages of responses, and mean response rates. In addition, correlational analysis and other procedures that are appropriate for the study will be performed.

Tier Four Methodology

The population will consist of postsecondary students who started as full-time, first-time freshmen in 1978 in two-year degree-granting institutions offering occupational education programs. Categories

have been developed to describe any student who continued or discontinued his/her postsecondary occupational education. They are:

- 1) Program completer - a first-time, full-time student who starts a two-year occupational education program and meets all the requirements for graduation within the two-year time frame.
- 2) Program leaver - a first-time, full-time student who starts a two-year occupational education program in which he/she is enrolled without successfully completing or meeting all the program requirements for graduation.

Questionnaires will be developed for collecting the data. The instrument will be administered to completers and leavers in two different forms.

The questionnaires will elicit data pertaining to:

- English as a second language
- program
- sex
- socioeconomic status
- race
- high school background
- reasons for attending college
- vocational and occupational goals
- extracurricular activities at college
- student/faculty relationships at college
- time of withdrawal
- factors for continuance
- reentry to same or different occupational education program
- relationship of employment to college program
- factors for leaving occupational education program
- family education background
- educational background of family members
- other elements identified during preparation of the instrument

The sampling strategy will be to select a stratified random sample from the population. The stratification will be: 1) major subject area, (e.g., business and commerce technologies); 2) sector/institution type, (e.g., independent); and 3) occupational education planning region (13).

The sample will be of sufficient size to ensure the statistical validity of the results without creating an excessive burden for onsite data collection and will address an appropriate proportion of completers and leavers. Data collection will consist of mailing the questionnaire to a stratified sample of completers and leavers and telephone calls to non-respondents.

Primary analysis of data will include frequency distribution, percentages of responses, and mean response rates. In addition,

correlational analyses and other procedures that are appropriate for the study variables will be performed.

APPENDIX A

**OCCUPATIONAL EDUCATION DATA
SYSTEM (OEDS) PROGRAM CLASSIFICATIONS**

OCCUPATIONAL EDUCATION PROGRAMS

I. Agriculture Education

Agriculture Production
Agriculture Business
Agriculture Mechanics
Agriculture Products
Ornamental Horticulture
Conservation
Other Agriculture

II. Distributive Education

Advertising Services
Apparel and Accessories
Finance and Credit
Food Distribution
General Merchandising-Sales
Hotel and Lodging
Real Estate
Recreational-Tourism
Transportation and Service
Other Distributive Education

III. Health Occupations Education

Dental Assisting
Dental Hygiene
Dental Lab Technology
Medical Lab
Medical Lab Assisting
Nursing, Associate Degree
Surgical
Medical Therapy Assisting
Radiologic Technology-X-Ray
Ophthalmic Dispensing
Environmental Health
Mental Health
Inhalation Therapy
Medical Assistant
Mortuary Science
Other Health Occupations

IV. Home Economics Education

Clothing and Textiles
Food Services
Home Furnishings
Instructional Support Services
Other Occupational Preparation

V. Business and Office Education

Bookkeeping and Accounting
Data Processing
Other Data Processing
General Office-Filing-Clerical
Information Communications
Stenographic-Secretarial
Supervision-Business Administration
Other Office Occupations

VI. Technical Education

Aeronautical Technology
Agricultural Technology
Architectural Technology
Automotive Technology
Chemical Technology
Civil Technology
Electrical Technology
Electronic Technology
Environmental Control Technology
Industrial Technology
Instrumental Technology
Mechanical Technology
Scientific EDP-Computer Technology
Other Engineering Technology
Health-Related Technology
Fire-Fighters Science Technology
Oceanographic Technology
Construction Technology
Other Technical Occupations

VII. Trade, Industrial, and
Service Education

Air Conditioning
Automotive Mechanics
Commercial Arts Occupations
Photography Occupations
Carpentry
Masonry
Plumbing and Pipefitting
Glazing
Drafting
Electrical Occupations
Electronics
Graphic Arts
Machine Shop-Machine Tool
Plastic Occupations
Law Enforcement-Firearms Control
Social Service Paraprofessionals
Education Paraprofessionals
Other Public Service Occupations
Quality Food Occupations
Refrigeration
Textile Production and Fabrication
Other Trade, Industry Service

APPENDIX B

INSTITUTIONS IDENTIFIED IN
TIERS ONE AND TWO

INSTITUTIONS

The base determinant in identifying the population to be studied may be described as those students who enrolled as full-time, first-time freshmen in two-year occupational education programs at the following institutions in New York State:

State University of New York (SUNY)--36

Agricultural and technical colleges--6

- SUNY Agricultural and Technical College at Alfred
- SUNY Agricultural and Technical College at Canton
- SUNY Agricultural and Technical College at Cobleskill
- SUNY Agricultural and Technical College at Delhi
- SUNY Agricultural and Technical College at Farmingdale
- SUNY Agricultural and Technical College at Morrisville

Community Colleges--30

- Adirondack Community College, Glens Falls
- Broome Community College, Binghamton
- Cayuga County Community College, Auburn
- Clinton Community College, Plattsburgh
- Columbia-Greene Community College, Hudson
- Community College of the Finger Lakes, Canandaigua
- Corning Community College, Corning
- Dutchess Community College, Poughkeepsie
- Erie Community College, Williamsville
- *Fashion Institute of Technology, New York City
- Fulton-Montgomery Community College, Johnstown
- Genesee Community College, Batavia
- Herkimer County Community College, Herkimer
- Hudson Valley Community College, Troy
- Jamestown Community College, Jamestown
- Jefferson Community College, Watertown
- Mohawk Valley Community College, Utica
- Monroe Community College, Rochester
- Nassau Community College, Garden City
- Niagara County Community College, Sanborn
- North Country Community College, Saranac Lake
- Onondaga Community College, Syracuse
- Orange County Community College, Middletown
- Rockland Community College, Suffern
- Schenectady County Community College, Schenectady
- Suffolk County Community College, Selden
- Sullivan County Community College, Loch Sheldrake
- Tompkins-Cortland Community College, Dryden
- Ulster County Community College, Stone Ridge
- Westchester Community College, Valhalla

*Offers certain baccalaureate degree programs in addition to associate degree programs.

The City University of New York (CUNY)--9

Community Colleges--9

Bronx Community College
Eugenio Maria de Hostos Community College
Fiorello H. LaGuardia Community College
Kingsborough Community College
Manhattan Community College
*Medgar Evers Community College
New York City Community College
Queensborough Community College

Other CUNY Campuses -- 1

**The College of Staten Island (Sunnyside Campus)

Independent Institutions -- 17

Academy of Aeronautics, Flushing
American Academy of Dramatic Arts, New York City
Boricua College
Bramson ORT
Cazenovia College, Cazenovia
Culinary Institute of America, Hyde Park
Elizabeth Seton College, Yonkers
Harriman College, Harriman
Hilbert College, Hamburg
Institute of Design and Construction, Brooklyn
Maria College of Albany, Albany
Maria Regina College, Syracuse
Mater Dei College, Ogdensburg
Paul Smith's College of Arts and Sciences, Paul Smiths
Russell Sage College (Junior College of Albany, The), Albany
Trocaire College, Buffalo
Villa Maria College of Buffalo, New York, Buffalo

TOTAL Number of Institutions in Population -- 62

*Offers certain baccalaureate degree programs in addition of associate degree programs.

**Lower division campus funded as a community college.

Bibliography

- Annas, Tommy and Bush, Marie A. Analysis of Attrition/Retention Survey. Office of Institutional Research and Analytical Studies. State University of New York. Albany. 1978.
- Astin, Alexander W. College Dropouts: A National Profile. American Council on Education. 1972.
- Bader, Phyllis D., ed. Retention of Students: Recommendations to the Chancellor. State University of New York. Office of Educational Services. June 1978.
- Blai, Boris, Jr. Two-Year College Dropouts - Why Do They Leave? Who Are They? How Many? ED 058 879. March 1972.
- Higher Education Data System (HEDS). University of the State of New York. Information Center on Education. Fall 1978.
- Fetters, William. Withdrawal from Institutions of Higher Education. National Center for Education Statistics (NCES). 1977.
- Gardner, John. "A Capacity for Innovation": 1976 Master Plan of the Commission on Independent Colleges and Universities. New York. June 1976.
- Kaufman, Barry, and Botwinick, Rena. Student Retention and Graduation at the City University of New York. Fall 1970 to Spring 1974. Office of Program and Policy Research. City University of New York, New York. 1975.
- Nutter, Donald Y. Student Retention in New York State Colleges. PS Volume 6, Number 4. The State Education Department, Albany. Fall 1978.
- Occupational Education Data System (OEDS). New York State Education Department. Information Center on Education. Albany, New York. Fall 1978.
- Pantages, Timothy J. and Creedon, Carol F. "Studies of College Attrition: 1950-1975." Review of Educational Research. Volume 48, Number 1. Winter 1978.
- Pervin, Lawrence A; Reiks, Louis E.; and Dalrymple, Willard eds. A Critical Review of Research: The College Dropout and Utilization of Talent. Princeton University Press. 1966.

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